



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,013	07/15/2003	Phillip J. Hawkins	NSD 2002-003	8606
7590 James C. Valentine Westinghouse Electric Company LLC 4350 Northern Pike Monroeville, PA 15146	12/21/2006		EXAMINER GREENHUT, CHARLES N	
			ART UNIT 3652	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 12/21/2006	DELIVERY MODE PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/620,013	HAWKINS ET AL.	
	Examiner Charles N. Greenhut	Art Unit 3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 02 November 2006.
- 2a) This action is FINAL.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

### **I. Claim Rejections - 35 USC § 112**

The following is a quotation from the relevant paragraphs of 35 U.S.C. 112:

(2) The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1.1. Claim 1 recites the phrase, "the plane the base member rotates in" in line 8. There is insufficient antecedent basis for this limitation since only the block member and not the base member is recited as rotating.

1.2. With respect to claim(s) 2, it is unclear what is meant by the term, "effects" in line 2.

1.3. Claim 10 is indefinite because channel heads may be of different sizes.

### **II. Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim(s) 1-6, 10-12, and 14 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over ADAMOWSKI (US 4,298,054 A) in view of YANAGISAWA (US 5,351,626 A).

1.1. With respect to claim(s) 1-4, ADAMOWSKI discloses a base member (14) having an inspection device (15), at least one gripper (11b), a block member (10), movable in a two perpendicular linear directions in horizontal and vertical directions (f1 and vertical), a foot member (at 12a) having a gripper (11a) for drawing the manipulator toward the tube sheet. ADAMOWSKI fails to teach the block member rotably connected to the base member. YANAGISAWA teaches a block member (20) rotatable with respect to the base member (20). It would have been obvious to one having ordinary skill in the art to modify ADAMOWSKI with

an additional degree of freedom enabling rotation about the vertical axis in order to improve the versatility of movement.

- 1.2. With respect to claim(s) 5-6, 10, 12, and 14 ADAMOWSKI additionally discloses standoffs (13) at least two grippers (11a)/(11b) and sized to permit more than one manipulator to be suspended and hydraulic/pneumatic drives (12a/b).
- 1.3. With respect to claim(s) 11, it would have been obvious to one having ordinary skill in the art to duplicate the manipulator of claim 1 in order to decrease the time required to perform the inspection and/or servicing.
2. Claim(s) 7 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over ADAMOWSKI in view of YANAGISAWA and further in view of SHUNICHI (US 4,070,561 A).
  - 2.1. With respect to claim 7, ADAMOWSKI fails to teach each gripper having a limit switch functioning to verify an acceptable degree of insertion. SHUNICHI teaches each gripper having a limit switch functioning to verify a pre-selected length of insertion (Col. 10 Li. 4 et seq.). It would have been obvious to one of ordinary skill in the art to modify ADAMOWSKI with the limit switches of SHUNICHI in order to provide feedback regarding the location of the grippers.
3. Claim(s) 12-13 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over ADAMOWSKI in view of YANAGISAWA and further in view of WARD (US 3,913,452).
  - 3.1. With respect to claim 12, ADAMOWSKI fails to teach the manipulator is approximately 30 pounds or less. WARD teaches a manipulator that is approximately 30 pounds or less (Col. 9). It would have been obvious to one of ordinary skill in the art to modify ADAMOWSKI with the light weight of WARD in order to minimize the gripping force required to suspend the manipulator.
  - 3.2. With respect to claim 13, ADAMOWSKI is silent regarding the load capacity of the apparatus. WARD teaches two or more fingers, each having a load capacity of fifty pounds (Col. 9 Li. 16) and therefore teaches supporting a payload as much as seventy pounds. It would have been

obvious to one of ordinary skill in the art to modify ADAMOWSKI with the load capacity of WARD in order to support equipment.

**III. Allowable Subject Matter**

1. Claim(s) 8-9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

1.1. With respect to claims 8-9 the following is a statement of reasons for the indication of allowable subject matter

1.1(a) While ADAMOWSKI and YANAGISAWA teaches the essential features of the manipulator and AMIET teaches a similar gripper, a manipulator having the gripper, as described in the language of claim 8 that further includes the unique feature of a ball bearings forced by a piston to move in the direction of movement of the piston up a tapered raceway to force insertion fingers outward, as detailed in the language of claim 8, is not taught or fairly suggested by the prior art.

**IV. Response to Applicant's Arguments**

Applicant's arguments entered 11/2/06 have been fully considered.

1. Applicant argues that claim 1, as amended, is not anticipated by YANAGISAWA because the block member of YANAGISAWA is not movable in a linear direction relative to the base member, as required by the limitations inserted by the amendment entered 11/2/06. This argument is persuasive. The rejection under 35 USC 102(b) over YANAGISAWA is, therefore, withdrawn. A new grounds of rejection, however, over ADAMOWSKI in view of YANAGISAWA is presented above. Applicant's remaining arguments with respect to YANAGISAWA are rendered moot in light of the new grounds for rejection.

2. Applicant argues that the teachings of SHUNICHI do not render claim 7 obvious because SHUNICHI fails to disclose a limit switch verifying a pre-selected length of insertion. This argument is not persuasive. A limit switch that detects insertion or non-insertion is capable of verifying a pre-selected length of insertion within the broadest reasonable interpretation of that term.

Art Unit: 3652

3. Applicant argues that claim 8, as amended, is not rendered obvious by AMIET because AMIET fails to teach the balls forced by a piston to move in the direction of movement of the piston up a tapered raceway to force insertion fingers outward as required by the limitations inserted by the amendment entered 11/2/06. This argument is persuasive.

**V. Conclusion**

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
2. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles N. Greenhut whose telephone number is (571) 272-1517. The examiner can normally be reached on 7:30am - 4:00pm EST.
4. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.
5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EILEEN D. LILLIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

Application/Control Number: 10/620,013  
Art Unit: 3652

Page 6

CG